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Remarks

Claims 1-11 are pending in the application.

Claims 1-8 are allowed.

Claims 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Shimomura et al. (U.S. Patent No. 6,775,482 B1, hereinafter "Shimomura").

Claims 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Yao et al. (U.S. Patent No. 6,580,532 B1, hereinafter "Yao").

Claims 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Each of the various rejections and objections are overcome by amendments that are made to the specification, drawing, and/or claims, as well as, or in the alternative, by various arguments that are presented.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., to just avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, since a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims

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has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewriting to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

### **Rejection Under 35 U.S.C. 102**

Claims 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Shimomura. The rejection is traversed.

Independent claim 9 has been amended solely to clarify Applicants' invention, and not for distinguishing from prior art references. No new matter has been added.

Applicants respectfully disagree that the features of Applicants' claim 9 are taught in Shimomura's Figure 2 and corresponding discussions.

Specifically, Shimomura teaches an all-light type light receiver that reproduces a light data signal and a synchronous light clock signal using a saturable absorber (Abstract, Figure 2). Importantly, there is no teaching in Shimomura of any method for routing messages in wireless networks, and certainly no teaching of such a method as provided in Applicants' claim 9. Moreover, claim nine teaches a plurality of steps occurring in a predefined sequence. The examiner is isolating different portions of the reference and applying them in a disjointed manner to arrive at the steps of claim nine.

Although the Office Action cited the low-speed light receiver unit 14a in Shimomura's Figure 2 as corresponding to optically receiving an optical signal, there is no teaching that this received signal, or the RZ light signal input at terminal 1b, is "one or more composite optical signals" or that Shimomura's receiver includes "converting said one or more composite optical signals into a plurality of frequency-based message signals," as provided in Applicants' claim 9.

The reference merely uses a very low frequency dither signal help compensate for signal path phase variation errors between a data signal and a clock signal (i.e., by imparting a known dither-based error or pre-emphasis component to the transmitted

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signal, the receiver may use the dither-based error to help extract a clock signal). This is entirely unlike the claimed invention.

Shimomura teaches that a part of the reproduced light data is converted by light receiving unit 14a into an electrical signal, which is then processed through the circuit to provide a light clock pulse at terminal 6b that is synchronous with the reproduced light signal output of the receiver.

The electrical signal from unit 14a is not "a plurality of frequency-based message signals". Hence, Shimomura's circuit that processes this electrical signal from 14a also does not teach the other features in Applicants' claim 9, which relate to the plurality of frequency-based message signals, such as "mixing each of the plurality of frequency-based message signals with a corresponding sub-carrier to generate corresponding sub-carrier modulated frequency-based signals", or combining and grouping the sub-carrier modulated frequency-based signals and optically converting and transmitting these signals, as provided in Applicants' claim 9.

As such, Shimomura fails to disclose each and every element of the claimed invention, as arranged in claim 9. Therefore claim 9 is allowable over Shimomura under 35 U.S.C. 102(e).

Since claim 10 depends from claim 9, it is also allowable over Shimomura under 35 U.S.C. 102. As such, the rejection should be withdrawn.

#### **Rejection Under 35 U.S.C. 102**

Claims 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Yao. The rejection is traversed.

Applicants submit that Yao's Figure 1 does not teach a method for routing messages in wireless networks, as provided in Applicants' claim 9. Instead, Yao teaches a phase noise suppression module in which a delayed first carrier signal from photodetector (PD) 116 and a second carrier signal 107 from coupler 106 are coupled into an electrical interferometer 120. The destructively and constructively-interfered outputs are processed in Yao's circuit, including a RF signal mixer 144, to produce a beat signal 146 that is fed back to the voltage controlled oscillator to reduce its phase noise (e.g., col. 4, line 33 to col. 5, line 37).

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Although the Office Action cited PD 116 as corresponding to receiving an optical signal, there is no teaching that the optical signal from laser transmitter 112, which carries the carrier signal 105, is "one or more composite optical signals", or that PD 116 converts "one or more of the composite optical signals into a plurality of frequency-based message signals", as provided in Applicants' claim 9.

Since Yao does not teach converting any composite optical signals into a plurality of frequency-based message signals, it also does not teach the subsequent steps involving these plurality of frequency-based signals, such as mixing each frequency-based message signal with a corresponding sub-carrier to generate corresponding sub-carrier modulated frequency-based signals, combining and grouping these sub-carrier modulated frequency-based signals, and optically converting and transmitting these signal, as provided in Applicants' claim 9.

As such, Yao fails to disclose each and every element of the claimed invention, as arranged in claim 9. Therefore claim 9 is allowable over Yao under 35 U.S.C. 102(b).

Since claim 10-11 depend from claim 9, and include all the limitations of claim 9, claims 10-11 are also allowable over Yao under 35 U.S.C. 102. As such, the rejection should be withdrawn.

#### Allowed Claims

Applicants thank the Examiner for the allowance of claims 1-8.

#### Objection to Claim 12 and 13

Claims 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12-13 depend from claim 11, and recite additional features therefore. Since claim 11 is patentable under 35 U.S.C. 102, for the same reasons as set forth above, claims 12-13 are also patentable under 35 U.S.C. 102.

Applicants respectfully request that the objection be withdrawn.

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Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 530-9404 so that arrangements may be made to discuss and resolve any such issues.

Respectfully submitted,

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